REMARKS

In the Official Action mailed on **September 22, 2004**, the Examiner reviewed claims 26-49. The numbering of the claims was objected to because of informalities. Claims 29, 37, and 45 were objected to as being in improper dependent form. Claims 32, 40, and 48 were objected to as being in improper dependent form. Claims 26, 34, and 42 were rejected under 35 U.S.C. §102(e) as being anticipated by Steinmetz Jr. (USPN 5,600,579, hereinafter "Steinmetz"). Claims 27-33, 35-41, and 43-49 were rejected under 35 U.S.C. §103(a) as being unpatentable over Steinmetz, in view of Hellestrand et al. (USPN 6,230,114, hereinafter "Hellestrand").

Objections to the claims

The numbering of the claims was objected to because of informalities.

Applicant notes the renumbering of the claims and has incorporated the renumbering herein.

Claims 29, 37, and 45 were objected to as being in improper dependent form.

Applicant respectfully points out that claims 28, 36, and 44 relate to calling code written in the computer programming language from the hardware description language, while claims 29, 37, and 45 relate to communicating data between types specified in the computer programming language with types specified in the hardware description language (see page 9, lines 22-26 of the instant application).

Accordingly, Applicant has amended claims 29, 37, and 45 to clarify that the invention communicates data between types specified in the computer programming language and types specified in the hardware description language. These amendments find support on page 9, lines 22-26 of the instant application.

7

Claims 32, 40, and 48 were objected to as being in improper dependent form.

Applicant has amended claims 32, 40, and 48 to correct the dependencies of these claims.

Rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a)

Claims 26, 34, and 42 were rejected as being anticipated by Steinmetz. Applicant respectfully points out that Steinmetz teaches a system that allows a **user to access C code from a PLI library** to act as a wrapper (see Steinmetz, col. 22, lines 53-61).

In contrast, the present invention **automatically generates wrappers** from the C source prototypes (see page 11, line 25 to page 12, line 6 of the instant application). Allowing a user to access C code to act as a wrapper is not the same as automatically generating wrappers from the C source prototypes. Automatically generating wrappers eliminates a time-consuming, error-prone manual process, and is much faster than the manual methods of Steinmetz. There is nothing within Steinmetz, either explicit or implicit, which suggests automatically generating wrappers from the C source prototypes. Note that the system of Steinmetz requires the user to manually generate code for the master model to access the PLI library functions (see Steinmetz, col. 22, lines 11-61).

Also note that automatically generating wrappers from the C source prototypes is not obvious because of it requires rather complicated and non-obvious conversion operations required when accessing C code from the hardware description language (see FIG. 17 and page 23, lines 4-10 of the instant application).

Accordingly, Applicant has amended independent claims 26, 35, and 42 to include the limitations from claims 28, 36, and 44, respectively to clarify that the present invention automatically generates wrappers from the C source prototypes. These amendments find support on page 11, line 25 to page 12, line 6 of the

8

instant application. Dependent claims 28, 36, and 44 have been canceled without prejudice. Dependent claims 29-33, 37-41, and 45-49 have been amended to correct antecedent basis.
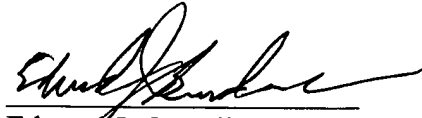
Hence, Applicant respectfully submits that independent claims 26, 35, and 42 are in condition for allowance. Applicant also submits that claims 27 and 29-33, which depend upon claim 26, claims 35 and 37-41, which depend upon claim 34, and claims 43 and 45-49, which depend upon claim 42, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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10